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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,438	07/17/2003	Ryo Horie	040894-5943	1093
9629	7590	04/12/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004				WIMER, MICHAEL C
ART UNIT		PAPER NUMBER		
		2828		

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,438	HORIE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael C. Wimer	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 January 2005.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsubaki et al. (6100849).

Regarding Claims 1-4, Tsubaki et al. show in Figures 2 and 3, an antenna with a dielectric body 11, a ground electrode 12 formed on a first surface of the body 11, a radiation electrode 22 having a first end left open and second end connected to the ground electrode via portion 16, a feeding terminal 17 (at least partially on the surface 12), a feeding electrode 21 having a first end connected to the feeding terminal 17 via capacitance "C" shown in Fig. 2 and a second end connected to the ground electrode 12 via portion 15, at least a first part of the feeding electrode 21 being extended in parallel with an elongated direction of the radiation electrode 22, all arranged as claimed. Tsubaki et al. do not appear to describe an "induction coupling".

However, a non-contact manner of excitation is clearly set forth in two ways. First, Tsubaki et al. explain in the fourth paragraph in column 4, that there is a magnetic coupling via the H field (Fig. 2) between conductors 15 and 16, and

second, that there is a capacitance coupling within the slit "s1" between the conductors 13 and 14.

From this explanation, an "induction coupling" may be defined as follows.

A magnetic field, "H", is "induced" in a non-contact manner.

A capacitive or electric field across the slit "s1" is "induced."

Therefore, it would have been obvious to the skilled artisan that there is an "induction coupling" in either of the spaces "s1" or "s2" set forth by Tsubaki et al. via the capacitive coupling. That is, an electric field exists in this capacitive slit "s1" so as to be induced in adjacent sides of the electrode.

Further, it would have been obvious to the skilled artisan that there is an "induction coupling" via magnetic field "H", in a non-contact manner. For purposes of this portion of the coupling, the terminal 16 is part of the electrode 14 (or 22 as in Fig. 3) and terminal 15 is part of the feeding electrode 13 (or 21 in Fig. 3). Thus, the "first part of the feeding electrode" 15 is extended in parallel with an elongated direction of the radiation electrode 14.

Similarly, regarding Claim 2, a capacitive coupling is clearly set forth, relative to the open ends of the electrodes at the slits "s1" or "s2", in column 4, lines 55-58, by Tsubaki et al.

Regarding Claim 3, Tsubaki et al. teach a quarter wavelength side associated with the feeding electrode (13 in Fig. 2 which is equivalent to Fig. 3, for example).

Regarding Claim 4, the communication device is shown in Fig. 8 as recited.

***Response to Arguments***

3. Applicant's arguments filed 1/25/2005 have been fully considered but they are not persuasive. Specifically, applicant's main argument is that the Office action does not establish a *prima facie* case of obviousness because Tsubaki et al. do not teach or suggest certain structures recited in Claim 1. However, the three basic criteria for such a case, set forth in the paragraph bridging pages 3 and 4 of the REMARKS, has been followed in the Office action rejection. The Office action also follows the guidelines of Graham v. Deere test for obviousness:

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

First, there is some suggestion or motivation "to combine reference teachings". In the Office action, Figures 2 and 3 of Tsubaki et al. were used as an example of showing what is claimed. The motivation to modify is within the teachings or suggestions of Tsubaki et al. where magnetic and electric coupling (via capacitance in the slit) defines an "induction coupling" as set forth above. Since there are two types of induced voltages or currents, "induction coupling" is deemed to result, and shown to be obvious to the skilled artisan. Given at least these two interpretations of an "induction coupling"

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between the two conductors in Tsubaki et al., obviousness has been set forth. The rejection stands.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Wimer  
Primary Examiner  
Art Unit 2828

MCW  
03/22/2005